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Collection of Vegetation Samples		
Revision: #4	**Replaces: 6/22/00 version**	**Effective: 6/25/02**

1. Purpose and Scope: Vegetation samples are collected to measure the amount of pesticide present on or in plants. Residue information collected from vegetation can be used to evaluate risks to human health if the vegetation is edible, or to wildlife susceptible to exposure to contaminated plants. This SOP describes how to collect, handle, and store vegetation samples. Any instructions on vegetation sampling and documentation found in the Environmental Monitoring Plan (EMP) supersedes instructions contained in this SOP.

2. Supplies Required: To request sampling equipment and other supplies to collect vegetation samples, contact the Laboratory Supplies Coordinator at the APHIS Analytical and Natural Products Chemistry Laboratory (ANPCL), Plant Protection and Quarantine, in Gulfport, MS at (228) 822-3106.

2.1 pruning shears or large scissors

2.2 collection pick (for collecting root or tubers)

2.3 garden rake or potato digger (for collecting submerged aquatic plants)

2.4 foil lined envelopes

2.5 strapping tape

2.6 12" x 12" resealable plastic bags

2.7 field log book

2.8 ice chest with wet, dry, or reusable ice packs (obtain locally)

2.9 environmental monitoring forms (APHIS Form 2060)

2.10 indelible marker

2.11 aluminum foil

2.12 disposable gloves

2.13 baby wipes

3. Collecting Above-Ground Vegetation: This sample consists of either leaves, grasses, fruits, grains, or seeds. Do not mix types of vegetation in a single sample. Collect samples from the portion of a plant most likely to have been (or to be) exposed to the pesticide.

3.1 While wearing disposable gloves, use the pruning shears or scissors to cut off the portion of the plant to be sampled.

3.2 Place the vegetation into a foil lined envelope. If a fruit is too large to fit into the foil envelope, then wrap it in aluminum foil and place it into a 12"x 12" resealable plastic bag.

3.3 Repeat steps 3.1 and 3.2 until the foil lined envelope is filled to about two inches from the top.

3.4 Fold over the top of the envelope twice and seal with strapping tape. Using the indelible marker, label the sealed envelope with the type of vegetation sampled, sampling site, and date such that the information matches the sample documentation.

3.5 Place the sample into the ice chest to keep it chilled until it can be transported to a freezer for storage until shipping.

3.6 Clean and decontaminate the pruning shears or scissors between each sample collection using fresh baby wipes.

4. Collecting Roots or Tubers:

4.1 Dig up roots or tubers with the collection pick. While wearing disposable gloves, shake off as much of the attached soil as possible.

4.2 Place the roots or tubers into a heavy foil envelope. If necessary, cut roots to lengths short enough to fit into the envelope.

4.3 Repeat steps 4.1 and 4.2 until the foil envelope is filled to about two inches from the top**.**

4.4 Fold over the top of the envelope twice and seal with strapping tape. Using the indelible marker, label the bag with the type of root or tuber sampled, sampling

site, and date such that the information matches the sample documentation.

4.5 Place the sample into the ice chest to keep it chilled until it can be transported to a freezer for storage until shipping.

4.6 Clean attached soil from the collection pick using water and then decontaminate with fresh baby wipes between each sample collection.

5. Collecting Submerged Aquatic Plants:

5.1 Using a potato digger or a garden rake, pull out submerged parts of aquatic plants. While wearing disposable gloves, shake the plants to remove excess water.

5.2 Place the plants into a heavy foil envelope. If necessary, cut plants into segments small enough to fit into the envelope.

5.3 Repeat steps 5.1 and 5.2 until the foil envelope is filled to about two inches from the top.

5.4 Fold over the top of the envelope twice and seal with strapping tape. Using the indelible marker, label the bag with the type of vegetation sampled, sampling site, and date such that the information matches the sample documentation.

5.5 Place the sample into the ice chest to keep it chilled until it can be transported to a freezer for storage until shipping.

5.6 Clean extraneous plant material from the digger or rake and then decontaminate using fresh baby wipes.

6. Documentation. A thorough description of the type of vegetation collected is important because the types of vegetation affect how the residue data is interpreted.

6.1 Record all observations in the field log book (see SOP EM-12, *Using a Field Log Book*). Include a sketch showing the location of the sample collection site and its relation to the treatment site and any nearby sensitive sites A topographical map or aerial photograph annotated with the required information should be provided if possible, as well as photographs or a video of the sample collection site. Global positioning system (GPS) coordinates of the site should

be included. Be sure to record the part of the plant collected (e.g. leaves, fruit, stems, seeds, roots), and the location on the plant from which the sample was taken (e.g. top, bottom, edge). Describe the height and density of any vegetation in the area between the treatment site and the sample collection site

6.2 Complete an APHIS Form 2060 for each vegetation sample.

6.3 Retain the pink copy of Form 2060 for your records and distribute the remaining copies as specified in the EMP.

7. Packaging and Shipping:

7.1 Package and ship the vegetation samples as described in SOP EM-17, *Packaging and Shipping of Samples*.